



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF RESEARCH AND DEVELOPMENT

MEMORANDUM

DATE: May 23, 2016

SUBJECT: Concept Memo for the 2016 RFA, "Oil and Gas Developments in Appalachian Basin."

FROM: Intaek Hahn, Project Officer, Matrix Interface, SHC, WHID/NCER *Intaek Hahn*

THROUGH: Darrell Winner, Senior Science Advisor, NCER *Darrell Winner (S.D.)*
Sylvana Li, Division Director, WHID/NCER *Sylvana Li*

TO: James H. Johnson, Jr., Director, NCER

The purpose of this memorandum is to obtain approval for the 2016 RFA: Oil and Gas Developments in Appalachian Basin and document agreement to move forward with the writing process.

Please see the attached document (Attachment A, Power Point presentation) outlining the concept for the 2016 RFA: Oil and Gas Developments in Appalachian Basin RFA. Attachment B lists the comments and suggestions from the meeting attendees, following the presentation.

APPROVING OFFICIAL DECISION

☒ Approved
☐ Modifications Required
☐ Denied

Comments:

Approving Official Signature:

James H. Johnson, Jr. 5/26/16
James H. Johnson, Jr., Ph.D., Director
National Center for Environmental Research

CC: Bryan Bloomer, Division Director, ASER/NCER
Sherri Hunt, Matrix Interface, ACE, ASER/NCER
Michael Hiscock, Matrix Interface, SSWR, WHID/NCER

BACKGROUND AND GENESIS OF THE CONCEPT

- There has been a rapid increase in oil and gas development (OGD) in the United States during the past decade.
- The Marcellus Shale and Utica Shale in the Appalachian Basin are two of the largest major reserves for oil and gas and the region has become a major center of the “shale gas boom” with thousands of unconventional wells spread throughout the region.
- In some cases, the wells and related infrastructures are being located close to population centers, some within a mile or two.
- There have been steadily increasing public concerns, mainly about potential risks to public health from chemical stressors associated with OGD as well as potential impacts to surrounding environments.
- For communities near OGD and production sites, the major stressors are air pollutants and ground and surface water contamination.
- The goal is to understand comprehensive environmental and public health impacts of the chemical stressors.

GOALS OF THE RFA:

Objective and comprehensive research addressing the multidisciplinary areas of interests pertaining to the topic of OGD.

- Air quality and air pollutants.
- Water quality, water pollutants, and maintaining sustainable water resources.
- Sustainable and Healthy Communities: investigate total environmental impacts from air and water pollutants.

THREE MAJOR AREAS OF RESEARCH QUESTIONS:

- Stressor and Exposure Characterization
 - Emissions and air quality
 - Water quality
 - Total human exposure
- Health impacts in a holistic, total environment framework
 - Environmental Impacts (air, water, ecology, local, regional)
 - Health effects from exposure to the primary environmental stressors (chemical stressors from OGD) with secondary, OGD-related non-chemical stressors as modifiers.
 - Near-term and long-term ecological and public health effects
 - Ecological health integrated with human health
- Evaluation of Most Effective Practices
 - Air/water quality control, pollution prevention
 - Sustainable practices/solutions

- Community planning/resiliency
- Public health and ecosystem service

WRITING TEAM:

The writing team will consist of individuals from across Agency program offices and regions.

- **ORD/NCER:** Darrell Winner, Michael Hiscock, Sherri Hunt, Intaek Hahn, Terry Keating
- **SHC IO:** Kevin Summers
- **ORD/NRMRL:** Brian Gullett, Tiffany Yelverton, Eben Thoma
- **Region 9/IOAA:** Jose Zambrana
- **SSWR IO:** Christopher Impellitteri
- **Region 3:** Angela McFadden, Amy Bergdale
- **NERL:** James Lazorchak, Brent Johnson, Andrew Gillespie, Gayle Hagler, Ann Grimm
- **OAQPS:** Bruce Moore
- **OW:** Scott Wilson, Kathryn Kazior, Jill Dean, William Bates

PROPOSED FUNDING:

- SHC housed FY16 \$3 Million
- Estimated Number of Awards: Four regular awards, up to \$750,000 per award, including direct and indirect costs are planned.
- Project period will be 3 years.
- Anticipated Type of Award: Grant (subject to National Priorities discussion below.)

DISCUSSION POINTS:

- Need to discuss the Congressional language and decide whether this RFA is a National Priority RFA. If yes, then, the language suggests it will only be confined to the water research pertaining to OGD in Appalachian Basin. A memo is required.
- Most scientific contents of the RFA are written, including ACE, SSWR, and SHC research questions.
- Concurrence Meeting of the RFA will likely be scheduled in a few weeks.

